

[Table 1]

	Melting point	Boiling point	Degree of sputtering (Ar ion, 500 eV)
Ti	1660 ± 10	3287	0.51
TiC	3140 ± 90	4820	-
TiN	2930	-	-
Ta	2996	5425 ± 100	0.57
TaC	3880	5500	-
TaN	3360 ± 50	-	-
W	3410 ± 20	5660	0.57
WC	3870 ± 50	6000	-
WN ₂	above 400	-	-
Zr	1852 ± 2	4377	0.65
ZrC	3540	5100	-
ZrN	2980 ± 90	-	-
Hf	2227 ± 20	4602	0.70
HfC	ca 3890	-	-
HfN	3305	-	-